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OBJECTIVES: Self-care with non-steroidal anti-inflammatory drugs (NSAIDs), etc. is widely used for pelvic pain relief in dysmenorrhea patients in Japan; however, guideline-recommended medical intervention consists of low-dose estrogen and progestin hormonal combinations (LEP). This study aims to assess the cost-effectiveness of intervention including LEP for the prevention of endometriosis and/or disease progression of dysmenorrhea, compared to self-care, in Japan. **METHODS:** A Markov model with a 43-year time horizon and annual cycles was constructed. The model consisted of five major health states with four sub-medical states based on gynecologists' consensus. The analyses were conducted from social, payer's and woman's perspectives. Transition probabilities among health and medical states were derived from epidemiological patient surveys. Disease-associated direct costs, such as inpatient, outpatient, surgery, and prescription and over-the-counter (OTC) drug costs were included. Utility measures were collected prospectively from patients with stage I-IV endometriosis using a visual analogue scale. An annual discount rate at 3% was considered. Sensitivity analyses were performed to examine the impact of uncertainties. **RESULTS:** Base case outcomes indicated that intervention would be superior to self-care when only considering direct costs (cost-saving amount of approximately 240,000 JPY, with 4.4 incremental quality-adjusted life-years [QALYs] gained). From the payer's perspective, intervention would be more cost-effective than self-care, as the incremental cost-effectiveness ratio (ICER) yielded 350,000 JPY per QALY gained. A tornado diagram depicting the deterministic sensitivity analysis was constructed, and robustness of the base case was confirmed. A probabilistic analysis resulting from 10,000-time Monte Carlo simulations demonstrated efficiency at Willingness-To-Pay thresholds of 5,000,000 JPY in more than 90% of the population. **CONCLUSIONS:** Our analysis demonstrated that, in Japan, intervention would be more cost-effective than self-care in preventing endometriosis and/or disease progression for patients with dysmenorrhea. These findings could be used to inform health-care decision-making in women with dysmenorrhea and health-policy makers.

INDIVIDUAL'S HEALTH – Patient-Reported Outcomes & Patient Preference Studies

PIH27
REVIEW OF ADHERENCE MEASURES FOR USE IN PHASE IV STUDIES AND RECOMMENDATIONS FOR A NEW STANDARDIZED GENERIC MEASURE

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OBJECTIVES: This study reviews adherence metrics for Phase IV studies. **METHODS:** We conducted a review of adherence metrics in the public domain. We critically appraised these metrics for use in Phase IV studies. **RESULTS:** We identified 70 unique self-report measures of adherence. One quarter (26%) were generic and the remaining were disease specific. Instrument length ranged from one to 78 items. One third (34%) only measured adherence behaviors, 37% only measured beliefs and attitudes, and 29% measured both. Just over one quarter (29%) were developed using a conceptual framework. One-fifth (21%) involved qualitative patient input during item generation or pretesting. Just over one-half (57%) had evidence of internal-consistency reliability, and far fewer had evidence of test-retest reliability (23%). One half (50%) had evidence of validity vis á vis other self-report measures, 23% vis á vis other adherence metrics, and 19% vis á vis clinical criteria. Few had evidence of predictive (24%) or postdictive (13%) validity. **CONCLUSIONS:** Few adherence measures have been developed with true patient-centerednesss. There has been no standardization of the content of adherence behaviors or beliefs. Instrument validation has been inconsistent in its breadth and depth. Because of the importance of medication adherence to payers, providers, pharmacies, and pharmaceutical companies, the time seems opportune to conceptualize, develop, and validate a generic adherence measure that can be used in Phase IV studies across different disease and patient groups. Standardization of content would allow for the assessment of adherence behaviors and beliefs between and across existing and novel therapies. There should be a minimum set of adherence concepts that apply across therapeutic areas. The new measure should be developed with patient input (concept elicitation) and verified as to its comprehension and relevance using cognitive debriefing. The scientific basis of medication adherence would be advanced through the development and validation of a standardized generic measure that assesses adherence behaviors and beliefs.

PIH28
SISTEMATIC REVIEW ON PERSONAL PREDICTORS OF ADHERENCE TO MEDICATION. THE CUMPLE-Q SCALE

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OBJECTIVES: A systematic review of scientific articles was accomplished in order to identify personal factors used as predictors of adherence to medication. **METHODS:** PubMed, PsycINFO, and cross-references were consulted using standardized queries. Original works were summarized using a pre-stablished set of content indicators. A multi-criteria decision analysis tool was developed to assess research quality, using 12 independent criteria: Explicative model, adherence measure, predictive validity, pathologies studied, concurrent validity, structural validity, construct validity, discriminant validity, sample size, study type, theoretical framework, and bibliographic review. Each criteria was valued as very good (100), good (80), acceptable (60), and bad (0/20); and a weighted sum was obtained considering all criteria. Valuations were carried out by two independent researchers and lack of agreement was disentangled by a third reviewer. **RESULTS:** A total of 113,560 studies were identified related to "adherence" and "persistence" between 1980 (454 studies) and May 2015, exhibiting an exponential growth rate with a maximum of 8,744 studies in 2014. After refining our search for personal predictive factors we ended with 272 articles from which only 32 were original research empirical studies (0.3 0/000). Most studies were cross-sectional (72%), with only (25%) being prospective. Patient reported outcomes were the most frequent adherence measures (65%). The Big Five model was the most frequent personality explicative framework (71%), followed by self-efficacy and beliefs. Conscientiousness was identified as an important adherent personality predictor. Quality of studies ranged between 53% and 86% with an average value of 67% (SD=8.8%). **CONCLUSIONS:** Although adherence is a frequently studied topic, few studies consider personal traits as a forecasting factor of medication persistence. A new instrument considering Conscientiousness as behavior predictor is being developed, the CUMPLE-Q.

PIH29
PATIENT-CENTERED REASONS FOR PRIMARY NON-ADHERENCE AS DERIVED FROM THE PEER-REVIEWED LITERATURE

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OBJECTIVES: Primary non-adherence (PNA) has been found to range from 1% to 57% with a mean and median of 16.4% and 15.0%, respectively. We abstracted patient-centered reasons for PNA and their prevalence from the peer-reviewed literature. **METHODS:** A systematic review using PubMed was conducted. A backward search of each abstracted article was performed as well as a review of each abstracted article's reference list. Patient-provided reasons for PNA were abstracted from each reviewed article **RESULTS:** A total of 131 articles met search-term criteria, and 19 contained patient-provided reasons for PNA. Eleven additional articles were identified from backward citation searches and/or review of the 19 article's reference list for a total of 30 studies. Fifty unique reasons for PNA were abstracted. After qualitative analysis, they were reduced to seven mutually-exclusive reasons. Prescription-medication affordability was the most common reason for PNA (80% of studies), followed by lack of perceived need for the medication (67% of studies), perceived medication concerns (53% of studies), lack of perceived drug efficacy (33% of studies), forgetfulness (33% of studies), access barriers (33% of studies), and patient knowledge (27% of studies). **CONCLUSIONS:** PNA is common both. Few adherence interventions have been developed and evaluated for PNA. The first step in developing adherence interventions for PNA is to gain an understanding of patient-centered reasons for PNA. This review identified the seven foremost reasons for PNA from 30 published studies. These seven reasons were: prescription-medication affordability, lack of perceived need for the medication, perceived medication concerns, lack of perceived drug efficacy, forgetfulness, access barriers, and patient knowledge. Researchers should standardize the content of PNA reasons to facilitate comparisons across patient samples. Many of the reasons for PNA can be addressed with patient-centered counselling at the time of prescribing. If we are to reduce PNA, doctor-patient communication must be improved to address patients beliefs about the need for the medication and their concerns about it.

PIH30
A NOVEL METHOD FOR CALCULATING MEDICATION ADHERENCE TO POLY-PHARMACOTHERAPY BY LINKING GENERAL PRACTICE PRESCRIBING DATA AND PHARMACY DISPENSING RECORDS

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OBJECTIVES: Adherence measurements developed for mono-pharmacotherapy, such as the Medication Possession Ratio (MPR), are not appropriate to calculate adherence to poly-pharmacotherapy. These standard metrics tend to over/under estimate adherence in patients with treatment regimens consist of multiple medications. This study aimed to develop a new method for calculating medication adherence in patients using poly-pharmacotherapy by linking prescribing and administration data of general practitioners (GPs), and pharmacy dispensing records. **METHODS:** We evaluated existing methods for calculating medication adherence from dispensing data records. Standards for estimating medication adherence to poly-pharmacotherapy were defined. A new approach to calculate adherence to poly-pharmacotherapy was developed. **RESULTS:** The proposed new approach for estimating medication adherence to poly-pharmacotherapy consists 2 novel indexes (the multiple-Medications Prescribing Ratio [mMPrR] and the multiple-Medications Possession Ratio [mMPR]) and a medication adherence visualization tool (the Prescription and Medication Possession Graph [PMPG]). The mMPrP is for calculating adherence to prescribe medications and the mMPR to (re)fill prescriptions. The PMPG completes the mMPrR and the mMPR with indicating medication adherence in time and allowing to evaluate tendencies in the observation period. Among other parameters, number of medications, therapeutic indication, treatment length (e.g., chronic conditions requiring periodic treatment), dosage, generic and therapeutic switching, therapeutic duplication, and oversupply were considered for the construction of mMPrP, mMPR and PMPG. The face-validity of the approach were demonstrated with four illustrative cases (i.e., generic switching, therapeutic duplication, oversupply, periodic treatment). **CONCLUSIONS:** The proposed new method enables a more accurate measurement of adherence to poly-pharmacotherapy compared to MPR. The mMPrP, the mMPR and the PMPG would allow GPs to identify substantial adherence issues during consultations and could be routinely used to enhance medication adherence in countries where GPs have access to pharmacy dispensing records of their patients such as in Hungary.

PIH31
INCONSISTENCY IN THE VALUATIONS OF EUROQOL EQ-5D-5L HEALTH STATES IN CHINA WAS MORE RELATED TO INTERVIEWER AND TO INTERVIEW PROCESS THAN TO RESPONDENTS' CHARACTERISTICS

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